Tle

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/776,004	02/10/2004	David paul Yach	1578.106	9095

44208 7590 08/08/2006

DOCKET CLERK
PO BOX 12608
DALLAS, TX 75225

EXAMINER	
VAUTROT, DENNIS L	
ART UNIT	**PAPER NUMBER**
2167	

DATE MAILED: 08/08/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/776,004	YACH ET AL.	
	Examiner	Art Unit	
	Dennis L. Vautrot	2167	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *2/10/2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-20* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-20* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *10 February 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *1/4/2005*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Information Disclosure Statement

1. The information disclosure statement (IDS) submitted on 4 January 2005 has been received and entered into the record. Since the IDS complies with the provisions of MPEP § 609, the references cited therein have been considered by the examiner. See attached forms PTO-1449.

Claim Objections

2. Claims 3, 4, and 15 are objected to because of the following informalities: Regarding claim 3, the claim appears to be an exact duplicate of claim 2. Regarding claim 4, "generater" in line 3 appears to be misspelled. Regarding claim 15, the claim appears to recite the same limitation from lines 7-9 as it does from line 10-12. Appropriate correction is required.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1-4 and 8-19 are rejected under 35 U.S.C. 102(e) as being anticipated by **Weinstein et al.** (hereinafter **Weinstein**, US 2004/0246902).

5. Regarding claim 1, **Weinstein** teaches in a radio communication system, (see page 6, paragraph [0058] "...this invention is described herein in terms of its applicability to a packet radio network...it may include wired, radio, sonar, optical, microwave and other physical forms of communication.")

having a network part that maintains at least a network-copy first database containing data and a mobile node that maintains at least a mobile-copy first database containing data (See page 5, paragraph [0049] "FIGS. 7-12 are flow charts that illustrate an exemplary process, consistent with principles of the invention, for synchronizing databases between two nodes in network 100 using database digests." The two nodes can correspond to the network copy and a mobile copy of the database.);

the data of the network-copy and the mobile-copy of the first database, respectively, correspond when the network-copy and the mobile-copy of the first database are in match with one another (See page 5, paragraph [0052] "If the locally determined digest, and the retrieved compartment digest, are not the same, then the corresponding compartment of the routing database may be considered out-of-sync." In other words, they would be considered in-sync when they do correspond to each other. Additionally, the digest mentioned here is the way the reference refers to the "hash" as used in the instant application. See page 5, paragraph [0050] "The digests may include, for example, a checksum or a hash computed over the fields of the...database."),

an improvement of apparatus for selectably altering the data of at least one of the network-copy and the mobile-copy of the at least the first database to place the network-copy and the mobile-copy in match with each other (See page 6, paragraph [0056] "A local copy of the marked route advertisement may be flooded to the new neighbor [act 1210]. A copy of the marked route advertisement may also be received from the new neighbor [act 1215]. The copy (i.e., local or neighbor) of the route advertisement that is most up-to-date may be accepted as the route advertisement to be used for routing purposes [act 1220]." The specification of the reference refers to "marked route advertisements" and that will be used through out this office action to refer to the data contained in the database. The reference makes clear in paragraph [0059] that their disclosure is not limited to marked route advertisements. "...it will be apparent, that the invention does not actually depend on the content of the database....the same method could be applied to any type of distributed database whose contents had to be kept synchronized, as long as its contents are amenable to subdivision into compartments as previously described and the contents of each compartment are amenable to summarization by means of a "database digest."), said apparatus comprising:

a hash generator embodied at the mobile node and adapted to receive representations of at least the mobile-copy of the at least the first database, said hash generator selectably for forming hash values responsive to the representations provided thereto (See page 2, paragraph [0011] "The method may include receiving routing data and performing a function on at least a portion of the routing data to produce a first

digest, where the first digest comprises substantially less data than the routing data." As previously mentioned, the "digest" is what the reference refers to as a hash, so the function that produces the digest is interpreted to be a hash generator.); the hash values for communication to the network part to determine whether the network-copy and the mobile-copy are in match with one another (See page 2, paragraph [0011] "The method may further include receiving a second digest from the other node and comparing the first and second digests to determine whether they are identical to produce first comparison results."); and

a content retriever embodied at the mobile node, said content retriever for retrieving data from the mobile-copy of the at least the first database upon detection of determination that the network-copy and the mobile-copy are out of match (See page 5, paragraph [0048] "During period 625 during which route advertisements from out-of-sync compartments are exchanged between master and slave, master may send one or more route advertisements and from an out-of-sync compartment to slave. The one or more route advertisements...are the offending advertisements determined in the digest exchange process describe[d] above. Slave may also send corresponding ones of the one or more route advertisements... to master." The mobile copy and the network copy are referred to here as master and slave, and can vary depending on which one has the updated information.), the data retrieved by said content retriever for communication to the network part, to be used to match the network-copy and the mobile-copy theretogether (See page 6, paragraph [0056] "A local copy of the marked route

advertisement may be flooded to the new neighbor. A copy of the marked route advertisement may also be received from the new neighbor.")

6. Regarding claims 2 and 3, **Weinstein** additionally shows said hash generator generates the hash values responsive to an external triggering event, occurrence of which is detectable at the mobile node. (See page 4, paragraph [0045] "Slave may determine database digests of its own route advertisement database in response to receipt of message from master." The message from the master is the triggering event. The has generator is what determines the digests (i.e. hash).)

7. Regarding claim 4, **Weinstein** additionally teaches said hash generator generates the first-type hashes upon detection of an external triggering event, indications of occurrence of which is detectable at the mobile node (See page 4, paragraph [0038] "During period 610 in which 'top-level database digests' are exchanged, a router, designated as a 'master' in the database digest exchange process, may determine database digests. The 'top-level database digests' may include digests of all the compartments' of route advertisements portion of database 300. The digests may include, for example, a checksum or a hash computed over the fields of the multiple route advertisements stored in database 300."); and wherein said hash generator generates the second-type hashes responsive to determination of mismatch of the first-type hashes, generated by said hash generator, with network-calculated values (See page 4, paragraph [0042] "To identify the out-of-sync

advertisement(s) [data], the process may be repeated. The compartment may again be subdivided into multiple subcompartments, and a separate database digest computed for each." The separate database digests for the subcompartments make up the second-type hash referred to in the claim.)

8. Regarding claim 8, **Weinstein** teaches a further improvement of apparatus for the network part also for selectably altering the data of at least one of the network-copy and the mobile-copy of the at least the first database (See page 5, paragraph [0052] "If a top-level database digest message has been received from the new neighbor, then a database digest ACK, indicating which database compartments are in sync, may be sent to the new neighbor" This provides for the apparatus to selectably alter the database that needs updating.), said apparatus comprising: a determiner adapted to receive values of the hash generated by said hash generator, said determiner for determining whether the values of the hash correspond with locally-generated values (See page 5, paragraph [0052] "If the locally determined digest, and the retrieved compartment digest are not the same, then the corresponding compartment of the routing database may be considered out-of-sync."); and a requestor coupled to said determiner to receive indications of determinations made thereat, said requestor selectably for requesting additional information associated with the mobile-copy of the at least the first database (See page 5, paragraph [0053] "If not, then a database digest message may be received from the new neighbor (i.e., the 'master') containing separate database digests for sub divided sub-compartments. A determination may be made as

to which of the sub-compartments are in-sync." The separate digests from the sub-compartments are part of the additional information requested and helps to select which copy need updating.)

9. Regarding claim 9, **Weinstein** additionally teaches the hash generated by said hash generator is selectably of a first hash-type and at least a second hash-type, and wherein the locally-generated values with which said determiner compares the hash are correspondingly selectably of a first hash-type and a second hash-type (See page 5, paragraph [0052] "To determine which database compartments are in-sync, each compartment digest retrieved from the received top-level database digest may be compared with a corresponding locally determined digest." This refers to the first hash-type - and see paragraph [0053] "To determine which database sub-compartments are in-sync, each sub-compartment digest retrieved from the received database digest message may be compared with a corresponding locally determined digest." This is referring to the second-type hash. Based upon which type of hash is provided, the hash to be used is selected by using the same types, as they represent the same range over the database.)

10. Regarding claim 10, **Weinstein** additionally teaches the additional information requested by said requestor comprises a request for the mobile node to deliver hash information of the second hash-type to the comparator (See page 5, paragraph [0053] "If not, then a database digest message may be received from the new neighbor (i.e.,

the 'master') containing separate database digests for sub divided sub-compartments. A determination may be made as to which of the sub-compartments are in-sync." As stated previously, the second hash-type is made up of the sub-compartments in the reference.)

11. Regarding claim 11, **Weinstein** additionally teaches the data maintained at the network-copy and the mobile-copy of the at least the first database is comprised of data records and wherein the additional information requested by said requester comprises a request for the mobile node to deliver values of at least portions of the data records. (See page 5, paragraph [0048] "During period 625 during which route advertisements from out-of-sync compartments are exchanged between master and slave, master may send one or more route advertisements and from an out-of sync compartment to slave. The one or more route advertisements...are the offending advertisements determined in the digest exchange process describe[d] above. Slave may also send corresponding ones of the one or more route advertisements ...to master." As mentioned previously, the "route advertisements" that are requested is what the reference refers to the data contained in the referenced database. Put in terms of the claims, the "route advertisements" are the same thing as "portions of the data records.")

12. Regarding claim 12, **Weinstein** teaches a comparator adapted to receive the values of the at least the portions of the data records responsive to the request therefor to the mobile node, said comparator for comparing the values with corresponding

values of the network-copy of the at least the first database. (See page 6, paragraph [0054] "To determine which database compartments are in-sync, each compartment digest retrieved from the received database digest message may be compared with a corresponding locally determined digest. If the locally determined digest, and the retrieved compartment digest, are not the same, then the corresponding compartment of the routing database may be considered out-of-sync." The mobile node receives the compartment digests, which represent the hash of the data records responsive to the request. Then, See page 6, paragraph [0056] "A local copy of the marked route advertisement [the data] may be flooded to the new neighbor." This represents the actual portions of the data record being sent.)

13. Regarding claim 13, **Weinstein** teaches a database value updater coupled to said comparator, said database value updater selectably operable responsive to comparisons made by said comparator to alter at least one data record of a selected one of the mobile-copy and the network-copy of the at least the first database. (See page 6, paragraph [0056] "A local copy of the marked route advertisement [the data] may be flooded to the new neighbor. A copy of the marked route advertisement may also be received from the new neighbor." As shown, the mobile copy can receive the updated information or the network copy can receive the updated information, (i.e. data flooded to or received from the new neighbor.))

14. Regarding claim 14, **Weinstein** teaches database value updater operates pursuant to a selected conflict resolution protocol. (See page 6, paragraph [0056] "The copy (i.e., local or neighbor) of the route advertisement that is the most up-to-date may be accepted as the route advertisement to be used for routing purposes." In other words, the data that will be stored is the one that was considered the updated version.)

15. Regarding claim 15, **Weinstein** additionally teaches in a method of communicating in a radio communication system (see page 6, paragraph [0058] "...this invention is described herein in terms of its applicability to a packet radio network...it may include wired, radio, sonar, optical, microwave and other physical forms of communication."),

having a network part that maintains at least a network-copy first database containing data and a mobile node that maintains at least a mobile-copy first database containing data (See page 5, paragraph [0049] "FIGS. 7-12 are flow charts that illustrate an exemplary process, consistent with principles of the invention, for synchronizing databases between two nodes in network 100 using database digests." The two nodes can correspond to the network copy and a mobile copy of the database.);

the data of the network-copy and the mobile-copy of the first database, respectively, correspond when the network-copy and the mobile-copy of the first database are in match with one another (See page 5, paragraph [0052] "If the locally determined digest, and the retrieved compartment digest, are not the same, then the corresponding compartment of the routing database may be considered out-of-sync."

The digest mentioned here is the way the reference refers to the "hash" as used in the instant application. See page 5, paragraph [0050] "The digests may include, for example, a checksum or a hash computed over the fields of the...database."),

an improvement of a method for selectably altering the data of at least one of the network-copy and the mobile-copy of the at least the first database to place the network-copy and the mobile-copy in match with each other (See page 6, paragraph [0056] "A local copy of the marked route advertisement may be flooded to the new neighbor [act 1210]. A copy of the marked route advertisement may also be received from the new neighbor [act 1215]. The copy (i.e., local or neighbor) of the route advertisement that is most up-to-date may be accepted as the route advertisement to be used for routing purposes [act 1220]." The specification of the reference refers to "marked route advertisements" and that will be used through out this office action to refer to the data contained in the database. The reference makes clear in paragraph [0059] that their disclosure is not limited to marked route advertisements. "...it will be apparent, that the invention does not actually depend on the content of the database....the same method could be applied to any type of distributed database whose contents had to be kept synchronized, as long as its contents are amenable to subdivision into compartments as previously described and the contents of each compartment are amenable to summarization by means of a "database digest."), said method comprising:

selectably sending first hash information from the mobile node to the network part, the first hash information representative of the mobile-copy of the first database

thereto (See page 2, paragraph [0011] "The method may include receiving ... data and performing a function on at least a portion of the ... data to produce a first digest, where the first digest comprises substantially less data than the routing data." As previously mentioned, the "digest" is what the reference refers to as a hash. And see page 4, paragraph [0045] "Slave may determine database digests [hash] of its own route advertisement database [data] in response to receipt of message from master. Slave may then return a database digest [hash] ACK message to master indicating which compartments, identified in message, are out of sync." Here the mobile node is referred to as the "slave" in the reference.)

comparing, at the network part, the first hash information sent during said operation of selectably sending with corresponding network-copy first hash information (See page 6, paragraph [0054] "To determine which database compartments are in-sync, each compartment digest retrieved from the received database digest message may be compared with a corresponding locally determined digest. If the locally determined digest, and the retrieved compartment digest, are not the same, then the corresponding compartment of the routing database may be considered out-of-sync.");

and selectably requesting additional information regarding the mobile-copy first database responsive to comparisons made during said operation of comparing the first hash information (See page 4, paragraph [0042] "To identify the out-of-sync advertisement(s), the process may be repeated. The compartment may again be subdivided into multiple subcompartments, and a separate database digest computed

for each." The additional information is what is returned in the form of subcompartments.)

16. Regarding claim 16, **Weinstein** additionally teaches the additional information requested during said operation of selectably requesting comprises second hash information from the mobile node to the network part, the second hash information also representative of the mobile copy of the at least the first database. (See page 5, paragraph [0053] "If not, then a database digest message may be received from the new neighbor (i.e., the 'master') containing separate database digests for sub divided sub-compartments. A determination may be made as to which of the sub-compartments are in-sync." As stated previously, the second hash-type is made up of the sub-compartments in the reference.)

17. Regarding claim 17, **Weinstein** additionally teaches sending the second hash information from the mobile node to the network part (See page 4, paragraph [0045] "Slave may determine database digests [hash] of its own route advertisement database [data] in response to receipt of message from master. Slave may then return a database digest [hash] ACK message to master indicating which compartments, identified in message, are out of sync." Here the mobile node is referred to as the "slave" in the reference.); comparing, at the network part, the second hash information sent during said operation of sending the second hash information with corresponding network-copy second hash information (See page 6, paragraph [0054] "To determine

which database compartments are in-sync, each compartment digest retrieved from the received database digest message may be compared with a corresponding locally determined digest. If the locally determined digest, and the retrieved compartment digest, are not the same, then the corresponding compartment of the routing database may be considered out-of-sync."); and selectably requesting at least portions of the mobile-copy of the at least the first database responsive to comparisons made during said operation of comparing the second hash information (See page 5, paragraph [0048] "During period 625 during which route advertisements from out-of-sync compartments are exchanged between master and slave, master may send one or more route advertisements and from an out-of sync compartment to slave. The one or more route advertisements...are the offending advertisements determined in the digest exchange process describe[d] above. Slave may also send corresponding ones of the one or more route advertisements [the data] ...to master." As mentioned previously, the "route advertisements" that are requested is what the reference refers to the data contained in the referenced database. Put in terms of the claims, the "route advertisements" are the same thing as "portions of the data records.")

18. Regarding claim 18, **Weinstein** additionally teaches the operations of delivering the at least the portions of the mobile-copy to the network part, comparing the portions of the mobile copy delivered during said operation of delivering with corresponding portions of the network-copy of the at least the first database (See page 6, paragraph [0054] "To determine which database compartments are in-sync, each compartment

digest retrieved from the received database digest message may be compared with a corresponding locally determined digest. If the locally determined digest, and the retrieved compartment digest, are not the same, then the corresponding compartment of the routing database may be considered out-of-sync."), and selectably causing overwriting of the portions of a selected one of the network-copy and the mobile-copy responsive to comparisons made during said operation of comparing the portions of the mobile-copy. (See page 6, paragraph [0056] "A local copy of the marked route advertisement [the data] may be flooded to the new neighbor. A copy of the marked route advertisement may also be received from the new neighbor." This overwrites the portions that were sent to the copy.)

19. Regarding claim 19, **Weinstein** additionally teaches the selected one of the network-copy and the mobile-copy of which the portions thereof are selectably caused to be overwritten is selected according to a conflict resolution scheme. (See page 6, paragraph [0056] "The copy (i.e., local or neighbor) of the route advertisement that is the most up-to-date may be accepted as the route advertisement to be used for routing purposes." In other words, the data that will be stored is the one that was considered the updated version. This is generically considered one scheme of conflict resolution, by using the date associated with the data.)

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

20. Claims 5 – 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Weinstein** as applied to claim 4 above, and further in view of **Yianilos et al.** (hereinafter **Yianilos**, US 2002/0029214).

21. Regarding claim 5, **Weinstein** teaches an apparatus substantially as claimed. **Weinstein** fails to teach the data maintained at the network-copy and the mobile-copy of the at least the first database is comprised of data records, each data record formed of fields including at least a first key field and at least a first record field, and wherein the second-type hashes selectably generated by said hash generator are formed of values of the at least the first key field. However, **Yianilos** teaches the data maintained at the network-copy and the mobile-copy of the at least the first database is comprised of data records, each data record formed of fields including at least a first key field and at least a first record field, and wherein the second-type hashes selectably generated by said hash generator are formed of values of the at least the first key field. (See page 5, paragraph [0070] "Get_All_Hashes: The input is an interval I of K. The output is a list of pairs of the form (key,hash). The list has one pair for each record in the database

whose key field belongs to I. The first element in the pair is the key field of the record, and the second element is a fixed size digest of the record.") It would have been obvious to one with ordinary skill in the art at the time of the invention to combine the teachings of **Weinstein** with that of **Yianilos** because they are both attempting to synchronize databases that use digests and by having the separate fields, there can be more efficient organization between the digests or hashes of the divided records of the database. It is for this reason that one of ordinary skill in the art would have been motivated to include the data maintained at the network-copy and the mobile-copy of the at least the first database is comprised of data records, each data record formed of fields including at least a first key field and at least a first record field, and wherein the second-type hashes selectably generated by said hash generator are formed of values of the at least the first key field.

22. Regarding claim 6, **Weinstein** teaches an apparatus substantially as claimed. **Weinstein** fails to teach the determination that the network-copy and the mobile-copy are out of match is made responsive to values of the second-type hashes formed of the values of the at least the key field. However, **Yianilos** teaches the determination that the network-copy and the mobile-copy are out of match is made responsive to values of the second-type hashes formed of the values of the at least the key field. (See page 6, paragraph [0083] "The synchronization algorithm starts by asking both databases to compute a single summary of all records lying in the given key interval. The Get_Interval_Hashes function is invoked for this. The remote summary is transferred to

the local side and compared with the local summary." The Get_Interval_Hashes is the function that creates the second-type hash in the reference.) It would have been obvious to one with ordinary skill in the art at the time of the invention to combine the teachings of **Weinstein** with the teachings of **Yianilos** because they are both performing similar functions and the addition of the second-type hash assists in being able to keep track of the separate pieces that the database is broken up in to. It is for this reason that one of ordinary skill in the art would have been motivated to include the determination that the network-copy and the mobile-copy are out of match is made responsive to values of the second-type hashes formed of the values of the at least the key field.

23. Regarding claim 7, **Weinstein** teaches an apparatus substantially as claimed. **Weinstein** fails to teach the data retrieved by said content retriever comprises both the at least the first key field and the at least the first record field. However, **Yianilos** teaches, the data retrieved by said content retriever comprises both the at least the first key field and the at least the first record field. (See page 6, paragraph [0081] "in this implementation the summary of a set of records consists of the number and a fixed size digest of records in the set of portions of one database are sent across the network in order to identify the discrepancies." It would have been obvious to one with ordinary skill in the art at the time of the invention to combine the teachings of **Weinstein** with that of **Yianilos** because both of the references are for performing similar goals, and both fields are necessary to be retrieved in order to keep the records organized during

the data comparison process. It is for this reason that one of ordinary skill in the art would have been motivated to include the data retrieved by said content retriever comprises both the at least the first key field and the at least the first record field.

24. Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over **Weinstein** as applied to claim 19 above, and further in view of **Brodersen et al.** (hereinafter **Brodersen**, US 2004/0162853). **Weinstein** teaches a method substantially as claimed. **Weinstein** fails to teach the operation of creating a change-history by indicating overwriting of the portions selectably caused during said operation of selectably causing. However, **Brodersen** teaches the operation of creating a change-history by indicating overwriting of the portions selectably caused during said operation of selectably causing. (See page 10, paragraph [0207] "Whenever the file attachment is changed, the client updates the file's attachments size and date, increments the number of times the file has been updated and logs an update transaction in the docking transaction log." It would have been obvious to one with ordinary skill in the art at the time of the invention to combine the teachings of **Weinstein** with those of **Brodersen** because a change history is useful in helping to determine which of the nodes has been updated in order to replicate the correct version of the data. It is for this reason that one of ordinary skill in the art would have been motivated to include teaches the operation of creating a change-history by indicating overwriting of the portions selectably caused during said operation of selectably causing.

Conclusion

25. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Bachner, III et al. (US 2005/0037787) teaches detecting changes on either side's databse, using radio signals, as well as using hashes for synchronization.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dennis L. Vautrot whose telephone number is 571-272-2184. The examiner can normally be reached on Monday-Friday 8:30-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Cottingham can be reached on 571-272-7079. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Dv
31 July 2006

JOHN COTTINGHAM
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100